UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,476	12/04/2006	Mitsuhiro Nishina	050203-0148	3244

31824 7590 12/03/2007

MCDERMOTT WILL & EMERY LLP
18191 VON KARMAN AVE.
SUITE 500
IRVINE, CA 92612-7108

EXAMINER	
NGHIEM, MICHAEL P	

ART UNIT	PAPER NUMBER
2863	

MAIL DATE	DELIVERY MODE
12/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

TH

Office Action Summary	Application No.	Applicant(s)	
	10/575,476	NISHINA ET AL.	
	Examiner	Art Unit	
	Michael P. Nghiem	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-9 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1 is/are rejected.

7)☒ Claim(s) 2-9 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 12 April 2006 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 9-10-07,4-12-06.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claim 9 is objected to because of the following informalities:

- "a second annunciating unit" (line 3) lacks antecedent basis. Where's the first?

Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321□ may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3, and 6 of copending

Application No. 11/790,759 (Nishina et al.). Although the conflicting claims are not identical, they are not patentably distinct from each other because Nishina et al. ('759) claims the following limitations.

"An apparatus (claim 1, line 1) for detecting a concentration and a remaining amount of a liquid reducing agent (claim 1, lines 3-5) comprising:

a sensing unit disposed in a storage tank that stores a liquid reducing agent for outputting a signal in relation to a concentration (claim 1, lines 3-5) and a remaining amount of the liquid reducing agent (claim 1, lines 22-23) based on a heat transfer characteristics between two points distant apart from each other (claim 1, lines 6-8); and

a control unit that includes therein a built-in computer (claim 1, line 9), wherein the control unit performs:

outputting a measurement trigger at every moment of a predetermined time interval after starting of an engine (claim 1, lines 11-12);

determining that a vehicle state is stable (state when vehicle is in stopped, claim 3, lines 2-4);

calculating the concentration of the liquid reducing agent based on the signal from the sensing unit when the measurement trigger is output (claim 1, lines 13-15) and it is determined that the vehicle state is stable (claim 3, line 4); and

determining the remaining amount of the liquid reducing agent when the measurement trigger is output, based on the signal from the sensing unit (claim 1, lines 22-23; claim 6, lines 2-3).

Even though Nishina et al. ('759) does not claim that the "stop" (stable) state is determined when a stop time for which a vehicle is continuously in a stationary state reaches a predetermined determination time, it would be obvious to one of ordinary skill in the art to wait for the vehicle to stop after a certain time before determining that the vehicle has been stopped.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

Claim 1-9 would be allowable if rewritten or amended to overcome the double patenting rejection(s) set forth in this Office action.

Reasons For Allowance

The **combination** as claimed wherein an apparatus for detecting a concentration and a remaining amount of a liquid reducing agent comprising a sensing unit disposed in a storage tank that stores a liquid reducing agent for outputting a signal in relation to a concentration and a remaining amount of the liquid reducing agent based on a heat transfer characteristics between two points distant apart from each other (claim 1) is not disclosed, suggested, or made obvious by the prior art of record.

Osaku et al. (US 2007/0075467) discloses a structure for reducing agent container (Fig. 1) comprising a detector (40) for detecting a remaining amount of liquid reducing agent (paragraph 0024, lines 15-16), a detector (42) for detecting a concentration of a liquid reducing agent based on heat transfer between two points (paragraph 0024, lines 27-29). However, Osaku et al. does not disclose detecting a remaining amount of the liquid reducing agent based on a heat transfer characteristics between two points.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Nghiem whose telephone number is (571) 272-2277. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MICHAEL NGHIEM
PRIMARY EXAMINER

Michael Nghiem

September 30, 2007